Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of automatically determining a need to service a digital image acquisition system including a digital camera with a lens assembly and electronic sensor array, the method comprising using a processor of the digital camera in:

(a) determining a probability that pixels within one or more acquired digital images correspond to dust artifacts;

(b) generating a master dust map describing physical manifestations of dust on the electronic sensor array based on the determining;

(c) calculating a transformation of the master dust map to generate a manifestation of the master dust map that includes information describing dust location and appearance as a function of one or more optical parameters including exit pupil dimension of the lens assembly or distance of dust from a surface of the electronic sensor array that corresponds to a focal plane of the lens assembly, or both;

(d) analyzing pixels within one or more further acquired digital images and updating the master dust map or the manifestation of said master dust map, or both, in accordance with the analyzing;

(e) determining based on the updating whether a threshold distribution of dust artifacts is present within said one or more further acquired digital images; and

(e) indicating a need for service of the system, including a cleaning process, by notifying a system user when at least said threshold distribution is determined to be present.

2. (original) The method of claim 1, wherein said one or more acquired images comprise one or more calibration images.

3. (original) The method of claim 1, said threshold distribution being determined based upon an analysis of the ability of an automatic blemish correction module of said digital image acquisition system to reasonably correct such blemishes within said images.

4-6. (cancelled)

7. (previously presented) The method of claim 1 wherein said one or more acquired images are acquired with specific acquisition setting comprising one or more of aperture, shutter speed, sensitivity, and subject matter.

8. (original) The method of claim 7, wherein said specific acquisition settings are automatically determined in a specific calibration mode on said digital image acquisition system.

9. (original) The method of claim 1, wherein said analyzing is based on defined time interval since last said analyzing.

10. (original) The method of claim 1, wherein said analyzing is based on defined in relations with change of lenses.

11-42. (cancelled)

43. (new) A digital image acquisition system including a digital camera with a lens assembly, electronic sensor array, a processor and a memory containing code for programming the processor to perform a method of automatically determining a need to service the digital camera, the method comprising:

indent   determining a probability that pixels within one or more acquired digital images correspond to dust artifacts;

indent   generating a master dust map describing physical manifestations of dust on the electronic sensor array based on the determining;

calculating a transformation of the master dust map to generate a manifestation of the master dust map that includes information describing dust location and appearance as a function of one or more optical parameters including exit pupil dimension of the lens assembly or distance of dust from a surface of the electronic sensor array that corresponds to a focal plane of the lens assembly, or both;

analyzing pixels within one or more further acquired digital images and updating the master dust map or the manifestation of said master dust map, or both, in accordance with the analyzing;

determining based on the updating whether a threshold distribution of dust artifacts is present within said one or more further acquired digital images; and

indicating a need for service of the system, including a cleaning process, by notifying a system user when at least said threshold distribution is determined to be present.

44. (new) The system of claim 43, wherein said one or more acquired images comprise one or more calibration images.

45. (new) The system of claim 43, said threshold distribution being determined based upon an analysis of the ability of an automatic blemish correction module of said digital image acquisition system to reasonably correct such blemishes within said images.

46. (new) The system of claim 43 wherein said one or more acquired images are acquired with specific acquisition setting comprising one or more of aperture, shutter speed, sensitivity, and subject matter.

47. (new) The system of claim 46, wherein said specific acquisition settings are automatically determined in a specific calibration mode on said digital image acquisition system.

48. (new) The system of claim 43, wherein said analyzing is based on defined time interval since last said analyzing.

49. (new) The system of claim 43, wherein said analyzing is based on defined in relations with change of lenses.

50. (new) One or more digital storage media having processor-readable code embedded therein for programming a processor to perform a method of automatically determining a need to service a digital image acquisition system including a digital camera with a lens assembly, an electronic sensor array, and a processor, the method comprising:

determining a probability that pixels within one or more acquired digital images correspond to dust artifacts;

generating a master dust map describing physical manifestations of dust on the electronic sensor array based on the determining;

calculating a transformation of the master dust map to generate a manifestation of the master dust map that includes information describing dust location and appearance as a function of one or more optical parameters including exit pupil dimension of the lens assembly or distance of dust from a surface of the electronic sensor array that corresponds to a focal plane of the lens assembly, or both;

analyzing pixels within one or more further acquired digital images and updating the master dust map or the manifestation of said master dust map, or both, in accordance with the analyzing;

determining based on the updating whether a threshold distribution of dust artifacts is present within said one or more further acquired digital images; and

indicating a need for service of the system, including a cleaning process, by notifying a system user when at least said threshold distribution is determined to be present.

51. (new) The one or more digital storage media of claim 50, wherein said one or more acquired images comprise one or more calibration images.

52. (new) The one or more digital storage media of claim 50, wherein said threshold distribution is determined based upon an analysis of the ability of an automatic blemish

correction module of said digital image acquisition system to reasonably correct such blemishes within said images.

53. (new) The one or more digital storage media of claim 50 wherein said one or more acquired images are acquired with specific acquisition setting comprising one or more of aperture, shutter speed, sensitivity, and subject matter.

54. (new) The one or more digital storage media of claim 53, wherein said specific acquisition settings are automatically determined in a specific calibration mode on said digital image acquisition system.

55. (new) The one or more digital storage media of claim 50, wherein said analyzing is based on defined time interval since last said analyzing.

56. (new) The one or more digital storage media of claim 50, wherein said analyzing is based on defined in relations with change of lenses.